THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING"

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An American Land Grant College

By Alfred Atkinson

President, Montana State College, Bozeman, Montana

EX-STUDENTS of twenty years ago and earlier who had a chance to visit O. A. C. during the summer of 1924 were greatly impressed with the wonderful physical plant and splendid facilities now in place at the Institution. The large number of well-constructed buildings show skill and thought in their planning and arrangements. Intelligent attention has evidently been given to the living conditions for students, and the whole environment of the place is a delight and inspiration to those of us who have had the privilege of getting training under its direction.

Ex-students who are in educational work in other institutions very naturally note the contrasts between the procedure and organization at their Alma Maters and the institutions where they are now working. The Editor of the Review asked me to write something about the conditions in the institution where I am now serving. I am glad to briefly describe the work in the Montana State College.

Montana State College is one of the forty-eight Land Grant Institutions—there being one in each State. These institutions have all been organized as a result of a Morrill Act passed by the United States Congress in 1864. Under this act, certain government lands were set aside in each state for the support of institutions to teach certain work in Applied Science, especially Agriculture and Engineering. All of these institutions get incomes from these lands and also through direct appropriations from the United States Government. Their main support comes from appropriations made by the State Legislatures.

The largest group in the Montana State College is in the Engineering College where, at the time of writing this article, October 31, there are 333 students that are specializing in the following departments: Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Industrial Chemistry and Engineering Physics. The largest group is in Electrical Engineering with 146 students.

In point of numbers the second largest group is in the Department of Household and Industrial Arts with a total of 204. This division includes the work in Home Economics, Applied Art, Secretarial Science and Special Course for Nurses.

Agriculture stands third, with 102 regular college students. This work is divided into Agronomy, Animal Husbandry, Dairy Husbandry, Horticulture and Agricultural Education.

The fourth group with 88 students is in the College of Applied Science, where students may major in Bio-Chemistry, Botany and Bacteriology, Entomology-Zoology and Education. Montana State College also maintains strong Science Departments because of the fundamental relation of the sciences to the major objectives of the Institution.

In addition to the above, there are a certain number of students in the School of Music. A registration of close to 100 Short Course Agricultural students who come for the twelve weeks' work, commencing with the first of January each year. Formerly the College had a three-year School of Agriculture, but the development of the agriculture in the High Schools has set aside the necessity for this.

The Montana State College has only one small Dormitory which accommodates sixty girls. A good many of the students live in the homes of the town. There are eleven Fraternity and Sorority houses. Each of these houses take care of from twenty to thirty students.

In harmony with the general plan in American Colleges, we have rather wide competitive relations with the Institutions in other States. Our athletic teams compete in the Rocky Mountain Conference, which includes the States of Colorado, Utah, Wyoming and Montana. Our Debate team competes with the Institutions in North and South Dakotas, Colorado and Kansas. While the long trips incident to these competitions have some objections, nevertheless there is substantial compensation in the widened range of experience which the students get from visiting and competing with other institutions.

The Montana State College makes a systematic effort to maintain close relationships with the high schools of the State. Part of this effort is devoted to arranging and conducting Vocational Conferences for high school boys and girls at the College each year. Under the plans being followed, the high schools send to the College each fall representative girls, and speakers of reputation are brought into discuss the various vocations which are open to young women. Each fall, two hundred to three hundred high school girls spend three days at the College.

A Boys' Vocational Conference is held during January each year, and from 1,000 to 1,200 high school boys spend three days attending this. These representatives are chosen by the high schools, and these carry back reports of the addresses at the conferences and tell the other students about their trip and about the College. Our experience convinces us that this effort is distinctly worthwhile.

Out of twenty-one years of experience in college work in one institution, and some opportunity to observe the life at two other large institutions, as well as three years serving as student at O. A. C., I am impressed with the importance of a college experience as well as a college course. By college experience is meant the general contacts and activities which a group of college people make possible. The student who fails to take advantage of these opportunities, loses much that will add to his usefulness and enjoyment through later years.

ONTARIO AGRICULTURAL COLLEGE LIBRARY

Roses

By Miss Isabella Preston

Specialist in Ornamental Horticulture, Central Experimental Farm, Ottawa

(Miss Preston is doing splendid work with rose and general plant breeding at the Central Experimental Farm, Ottawa.—A. H. T.)

"I know the secret of the rose, she blushes!"—Lytton.

WHETHER Lytton's solution of the riddle is correct, I would not care to say, but it is a generally accepted fact that the Rose is the Queen of Flowers and the favorite of all ages and peoples. Everybody loves roses and wherever possible has them in their homes, even if they cannot grow them. Undoubtedly, to grow fine hybrid teas and hybrid perpetuals requires a great deal of care in this country, but surely a garden of roses is worth any trouble with growing things. But for those who have not time nor inclination for growing these finer kinds, there are many others which will bloom well with no more attention than the ordinary flowering shrub. Several different species can be used in this way, and as they are hardy without protection in Ottawa and not susceptible to insects and diseases, they should be used more for shrubbery planting. The blooms are single, it is true, but there are so many of them that the bushes are very ornamental and they are followed later by fruits which vary in color and shape as much as the flowers of the different species do.

Rosa spinossissima, of which there are many varieties, are beautiful shrubs, the color of the flowers varies—creamy white, yellow and pink are found; the foliage is quite distinct and the leaves have seven to nine small leaflets, and the fruits are dark brown. The Scotch Roses of catalogues, some of which have double flowers, are hybrids of R. spinossissima. One of these roses grown next to R. rubrifolia make a beautiful group in the garden at Ottawa. R. rubrifolia, as the name suggests, has dark reddish purple foliage and stems. The flowers are small, bright pink in color and grow in clusters. The fruit is dark brownish red. This rose is quite hardy on the Prairies. I have made crosses of this species with R. rugosa, in which much of the red color of the leaves has been combined with the larger foliage of the rugosa parent, and the flowers are intermediate in size and of a delicate rose shade. The reciprocal cross has given plants with dark green leaves which turn reddish in fall and the flowers are intermediate in size and bright red in color.

R. alpina, the rose without a thorn, is specially noticeable in fall with its bright red urn shaped fruit. R. lucida (virginiana) makes a compact shrub with rose pink flowers which bloom considerably later than most rosa species. The foliage is bright and glossy and the fruit bright red.

R. eglanteria, the sweet briar of England, kills back a little, but is worthy of a place in the garden for the delightful fragrance of its leaves, which is specially noticeable after a shower of rain. The flowers are pale pink and the fruit red.

The Austrian briars, both the yellow and copper varieties, are beautiful, though they are not quite hardy and need protection in winter in the colder sections of the Province. The copper variety should be in all gardens, for there is no rose that gives such a vivid splash of color and the distinct two colors (coppery red with gold on the underside of the petals) make it always an object of interest in a garden.

Of the newer species, Hugonis is very fine and where it grows well a bush of this covered with its creamy yellow flowers is a sight worth remembering. It is not hardy at Ottawa and needs protection in winter.

R. helenae is a climbing species with large clusters of creamy white flowers with prominent yellow stamens. It holds its foliage late into the fall and has attractive small orange fruits. It needs some protection at Ottawa.

R. harrisoni, though not a true species, comes in the same class. It is the common yellow rose of old gardens and is a beautiful plant and quite hardy at Ottawa. Persian Yellow, often confused with this, has deeper colored much more double flowers. It blooms later, is not so floriferous and does not set seed.

Rosa rugosa and its hybrids are well known to everyone, but in ordering these it is well to remember that some set seed much more freely than others, and as the fruit of this species is particularly large and ornamental, they are of value in the fall garden.

There are several of the old-fashioned roses still listed in catalogues which need very little attention, such as R. centifolia, Provence, Red Damask, York and Lancaster, Maiden's Blush and several varieties of moss roses.

An old rose that should have a place

in every rose garden is Mme. Plantier, the clusters of double white roses are very fragrant, and is quite effective as a cut flower when arranged in a bowl.

The Hybrid Perpetuals are next on the list for hardiness, and many beautiful flowers come under this class. They are not perpetual flowering, though some varieties have a few blooms in the fall, but in June and early July they make a wonderful show in the garden, which is not equalled by the more popular Hybrid Tea. Among them are Coronation, a large pink; Frau Karl Druschki, pure white; General Jacqueminot, Hugh Dickson, Victor Hugo, Ulrich Brunner are all different shades of red; and Mrs. John Laing, pink. These are probably the best. Eugene Barbier, a recent introduction, is described as yellow. It does not grow well on the Central Experimental Farm, probably the conditions are not suitable.

There are so many varieties of Hybrid Teas and Pernetianas now on the market, that it is difficult to make a selection, but perhaps a short list of the less known varieties that we have tried at Ottawa may be of interest:

Duchess of Wellington, good yellow.
Earl Haig, large very double dark red, fragrant.
Edel, white.
Edith Cavell, pale cream.
Gladys Holland, pink shaded orange.
Isobel, large single salmon.
Jean G. N. Forrestier, Lincoln red.
Lady Maureen Stewart, dark red.
Los Angeles, pink and coral shaded gold.
Miss Lotita Armour, coppery yellow.
Modesty, cream flushed rose.
Mrs. Bertram J. Walker, cerise pink.
Mrs. Henry Morse, rose.
Mrs. Ramon de Escofet, flame crimson.
The Queen Alexandra, vermilion.
Souvenir de Claudius Pernet, yellow, very popular.

The most satisfactory class of roses for a small garden in the colder sections of the Province is the polyantha pompon or baby rambler type. With us it blooms from June until the severe frost. This season, some varieties had flowers out when the plants were covered for winter. The blooms are in clusters and vary in size and color. The following of the newer varieties have done well in Ottawa:

Coral Cluster, coral pink.
Miss Edith Cavell, dark red.
Marie Brissonet, pink.
Kosters Orleans, red.
La Marne, salmon.
Rodhatte, large flowers, bright cherry red.
Yvonne Rabier, white.

The winter protection of climbing roses has always been a serious problem in the colder districts. As these roses bloom on wood of the last season, it is essential to keep the canes from winter killing. For the last three seasons at the Experimental Farm, we have tied up the canes and covered them with long narrow boxes (without bottoms of course). These are filled with dry leaves and the lid put on so that the canes are kept dry though the boxes are covered with snow. This method has proved more satisfactory than any tried before.

Of varieties tested at the Farm, Dr. Van Fleet would rank as the best. The flowers are well shaped and a beautiful shade of soft pink, and it is as hardy as Dorothy Perkins or Crimson Rambler. Evangeline is a very attractive single rose delightfully fragrant.

Pemberton's White Rambler is a good white.
Emily Gray has a beautiful yellow flower and very attractive foliage.
Chatillon, a strong growing rambler, with large clusters of semi-double pink flowers.

Paul's Scarlet Climber, the most brilliant colored of any, needs careful protection. The first plants we had of this variety were killed outright the first winter, but this season we had two very fine plants that had wintered well and they were well worth a little extra care.

Alida Lovett, Bess Lovett and Mary Lovett, if they will live through our severe winters, will be welcome additions to this class.

Although there are so many roses in cultivation, the ideal type for the Canadian climate is still something to long for and it is hoped that the hybridizing work of Mr. J. W. Crow, of Simcoe, Ont., Mr. F. L. Skinner of Dropmore, Man., and other workers may be crowned with success, so that before many years have passed, there will be everblooming roses of good form and habit that are hardy all over the country.

The Objects and Methods of the Dominion Experimental Farms

By E. S. Archibald
Director of Dominion Experimental Farms System.

THE object of the Dominion Experimental Farms System is an intensely practical one. It may be defined as the attempt to discover by research and experiment, improved agricultural practices and improved methods of cheaper and greater production of farm products; included in this term are both field and garden crops and live stock and live stock products.

If agriculture is Canada's premier industry, and we think that no one can dispute this, certainly the object of bettering that industry is one of the most important which can be conceived. It is equally evident, when one thinks of the very wide field covered by the term "agricultural production," that an attempt to better methods of production involves activities of a widely diversified and thoroughly organized nature. To the agricultural student, as he progresses in his training and studies, it becomes more and more clear that while every line of investigation is planned and conducted so as ultimately to lead to a practical result applicable to daily farm practices, yet the basis of such results and the primary and essential factor to be studied is that of scientific research and experiment. It is by this means, and this alone, that well-founded and thoroughly proven results, discoveries and improvements are arrived at and put in such shape that they may conveniently and profitably be put into farm practice. Such research and experiment are perforce detailed and often carried on under circumstances which seem artificial, and with what to the casual observer would appear to be an unnecessary, burdensome and expensive amount of supervision. Often again, to such an observer, the connection between a piece of research work and possible practical results therefrom, is a very tedious one indeed, and he is perhaps apt to ridicule such work as being useless and impractical. He forgets, however, that it is not the intention of the Experimental Farms or of any other such institution to recommend to him the putting into actual practice of the experiment itself but rather the practical results of the experiment which it is hoped to obtain.

To cope as comprehensively as may be done with present day agricultural problems, and to disseminate the results of the work obtained, the activities of the Experimental Farms Branch have been divided up into fourteen main lines, or, as they are termed, Divisions. They are as follows: Animal Husbandry, Bacteriology, Bees, Botany, Cereals, Chemistry, Extension and Publicity, Economic Fibre Production, Field Husbandry, Forage Crops, Horticulture, Illustration Stations, Poultry and Tobacco. Each Division is under the charge of a Chief Officer with Assistants.

In various parts of Canada, there are established twenty-two Branch Farms and Stations as follows: Charlottetown, P. E. I.; Fredericton, N. B.; Kentville, N. S.; Nappan, N. S.; Ste. Anne de la Pocatiere, Que.; Lennoxville, Que.; Cap Rouge, Que.; La Ferme, Que.; Kapuskasing, Ont.; Harrow, Ont.; Morden, Man.; Brandon, Man.; Indian Head, Sask.; Rosthern, Sask.; Scott, Sask.; Swift Current, Sask.; Lethbridge, Alta.; Lacombe, Alta.; Summerland, B. C.; Agassiz, B. C.; Sidney, B. C.; Invermere, B. C. In addition there are a special horse-breeding station at St. Joachim, Que., a station devoted especially to tobacco production in Farnham, Que., and a limited amount of experimental work is also carried on at Wainwright, Alta., Fort Vermilion, Alta., Beaverlodge, Alta., Swede Creek, Dawson, Y. T., Salmon Arm, B. C., Forts Smith, Providence and Resolution, N. W. T., and Betsiamites, Que.

On the Branch Farms and Stations, each of which is under the charge of a Superintendent with staff, the work follows under the same main headings as those of the Divisions at Ottawa insofar as those divisions of the work in all or in part of their phases, are possible and advisable in the district served by each Branch Farm. The Superintendents of Branch Farms and the heads of the Divisions at Ottawa co-operate closely in the planning and carrying on of the work. The whole Experimental Farms system, both at headquarters and on the Branch Farms, is under the general control of the Director of Experimental Farms as head of the Branch.

Without a careful system of defining, establishing and carrying on of experiments over such a wide field, a great deal of confusion, duplication, and loss of time and money would necessarily result. Consequently, every experiment in every line of work, or what we term every "experimental project", is very carefully recorded for each Division and Branch Farm in every line of experimental work conducted. At the present time, some three thousand of these are under way and fresh ones are being put into operation as rapidly as circumstances warrant and funds permit. It is impossible, of course, within the limits of a brief article, to mention any considerable number of these projects, but a few of the more prominent and interesting lines of work might be cited.

In the work with cereals, one need only mention Marquis wheat, the discovery of which has had such a profound influence upon short production on the prairies. Marquis is, however, not the last word in this work and present efforts in cereal breeding give promise of varieties which may quite possibly out-yield Marquis, at the same time proving more resistant to rust which in some years is so destructive to the wheat crop. Very important work has been, and is being done in the production of new varieties of oats, barley, peas, flax and field beans, also in the study of improved methods of cereal breeding, field and laboratory technique and milling and baking work.

In the division of Forage Plants, one might instance the improvement of types of hay and pasture grasses. A type of timothy named Boon has been evolved which in comparative tests has never failed to give at least fifteen per cent. higher yield than commercial mixtures tried. Improved strains of Brome and Western rye grass have also been evolved, as well as a number of other hay and pasture grasses. A very interesting piece of work is the isolation of a strain of red clover of a decidedly perennial tendency.

Another most important line of work is that of the breeding and improvement of field roots and the endeavors being made to improve the quality of root seed sold upon our markets. In sections of the Maritime Provinces, club root of turnips is a very serious problem which has been overcome by the evolving of a strain resistant to this disease. Breeding work with corn and sunflowers is being actively and extensively carried on. It is hoped to secure varieties and strains of Indian corn which will mature in wide areas of the Dominion and which will give satisfactory yields. The increasing use of sunflowers in many districts has made the question of varieties for maximum yield an important one. This Division is also cooperating in the study of more accurate scientific methods and technique of conducting experimental work, so that more reliable results may be obtained.

The Division of Horticulture, covering as it does the field of tree and small ruits, vegetables and ornamental plantings, etc., etc., is one of the main divisions of the work and one in which marked results have been and are being obtained. With apples, a considerable number of varieties superior, cr of longer season, to those now in commerce have been evolved and are being propagated for distribution. The problem of tree fruit growing for the prairie provinces has made great progress, and although the production of a satisfactory apple for that area is not yet solved, there is strong hope that a continuation of present work will result in this solution.

The work of the Division of Field Husbandry is much of it of an immediately practical nature, that is, it conducts the applying under field conditions of the proved results of research, such as treatment of summerfallow, of stubble clearing, breaking, draining, irrigating, fertilizing, the use of rotations, the proper use of farm implements and the comparative study of different makes of these, etc., etc. This Division is also conducting detailed studies of weather conditions and their results on crops, the moisture requirements of various crops, etc., etc.

The work of the Division of Animal Husbandry is similar to that of Field Husbandry, in that it contains both practical and research phases. The work on the breeding of all classes of live stock, including horses, cattle, sheep and swine, the study of methods of breeding, feeding, management, housing, sanitation, dairying, etc., have been extensive and conducted in a way calculated to meet requirements under varying conditions and in all parts of the Dominion. At the Horse Farm at St. Joachim, Que., under the supervision of the Superintendent at Cap Rouge, the work is confined exclusively to horse breeding with the French Canadian breed; most interesting results are already available and some excellent lines of this breed are being established. Another very interesting feature is the research work in hybridizing and cross-breeding being conducted at the Buffalo Park at Wainwright, Alta., where an endeavor is being made to develop an animal combining the hardiness of the bison with the superior beef qualities of domestic cattle. Difficulties have been encountered in this work, yet progress is being made.

Possibly the Division in which the most outstanding progress has been made during recent years is that of poultry. Strains have been developed on several of the Experimental Farms from high - producing individuals, in which this high-producing tendency seems to have become thoroughly established. Males from this strain are distributed as rapidly as possible to farmers interested in poultry keeping. The Egg Laying Contest started only a few years ago on the Experimental Station at Charlottetown, P. E. I., has now spread until at least one contest is conducted in every Province of the Dominion. The interest in these is widening, year by year, and now that registration of poultry is an accomplished fact and is based upon performance in this contest work, its importance and value in aiding the poultry industry are evident.

A few words might be said on the methods whereby the Experimental Farms endeavor to get the results of their work to the farmer. First, this is done by means of Illustration Stations, of which there are almost one hundred and fifty now in operation throughout the Dominion, and upon which are demonstrated by the farmer himself, under the general direction of the Division of Illustration Stations of this Branch, some of the well-proven, most practical results of our experimental work as applied to regular farm practice and as demonstrating the cash value of these practices in increased and more economical production.

The Division of Extension and Publicity, by means of exhibits at fairs, tries to drive home practical lessons to the farmer. Each year every Division and every Branch Farm issues an annual report covering experimental work done during that year, and in addition, numerous publications, such as bulletins, circulars and pamphlets, are brought out. A press article service covering some six hundred Canadian papers is maintained and the officers of the Branch deliver as many lectures and illustrated talks as their other engagements will permit. In these, through correspondence, and in many other ways, the endeavor is made to carry our results home to the farmer and to establish as close and cordial relations with him as possible.

From the above necessarily fragmentary notes, which are given more with the hope of interesting the student in a further study of the work of the Farms than with the idea of giving him a great deal of information in this article itself, it will be seen that the Experimental Farms Branch, like the agricultural college, is playing a very important part in Canadian agriculture of to-day. The great difficulty still is, as it always has been, to persuade the farmer that to adopt in his practice what has been thoroughly proven would be to his benefit. To the graduate student returning to the land, the Experimental Farms Branch looks to no small degree for aid in this work. Such a graduate, familiar with our results, trained both in experimental methods and in the principles of good, practical farming, can do more to demonstrate on his own farm the value of scientific farming than can, possibly, any other member of the rural community.

What then of the future of Canadian agriculture? One reads in the papers almost any day of the visits of eminent men, well qualified to judge, to different parts of the Dominion and their statements that, in their opinion, areas yet unsettled, unbroken and without transportation facilities, may outrival and out-produce those areas now under the plough. It is one of the duties of this Branch to act as an pioneer in such districts, ascertain as far as possible what crops can be grown there, how best to grow them under local conditions, and where required, to evolve new varieties and strains suitable to those conditions. In this work, again, the college graduate, settling for himself in these newer districts can work hand in hand with us.

Rural Sanitation, Canada's Most Important Problem

Sixty-five per cent. of Canada' population exist in conditions the reverse to Sanitary. Students at O. A. C. and Graduates can be the means of changing such conditions.

By Edwin Newsome, S.E., Lecturer on Rural Sanitation Dept. of Agriculture.

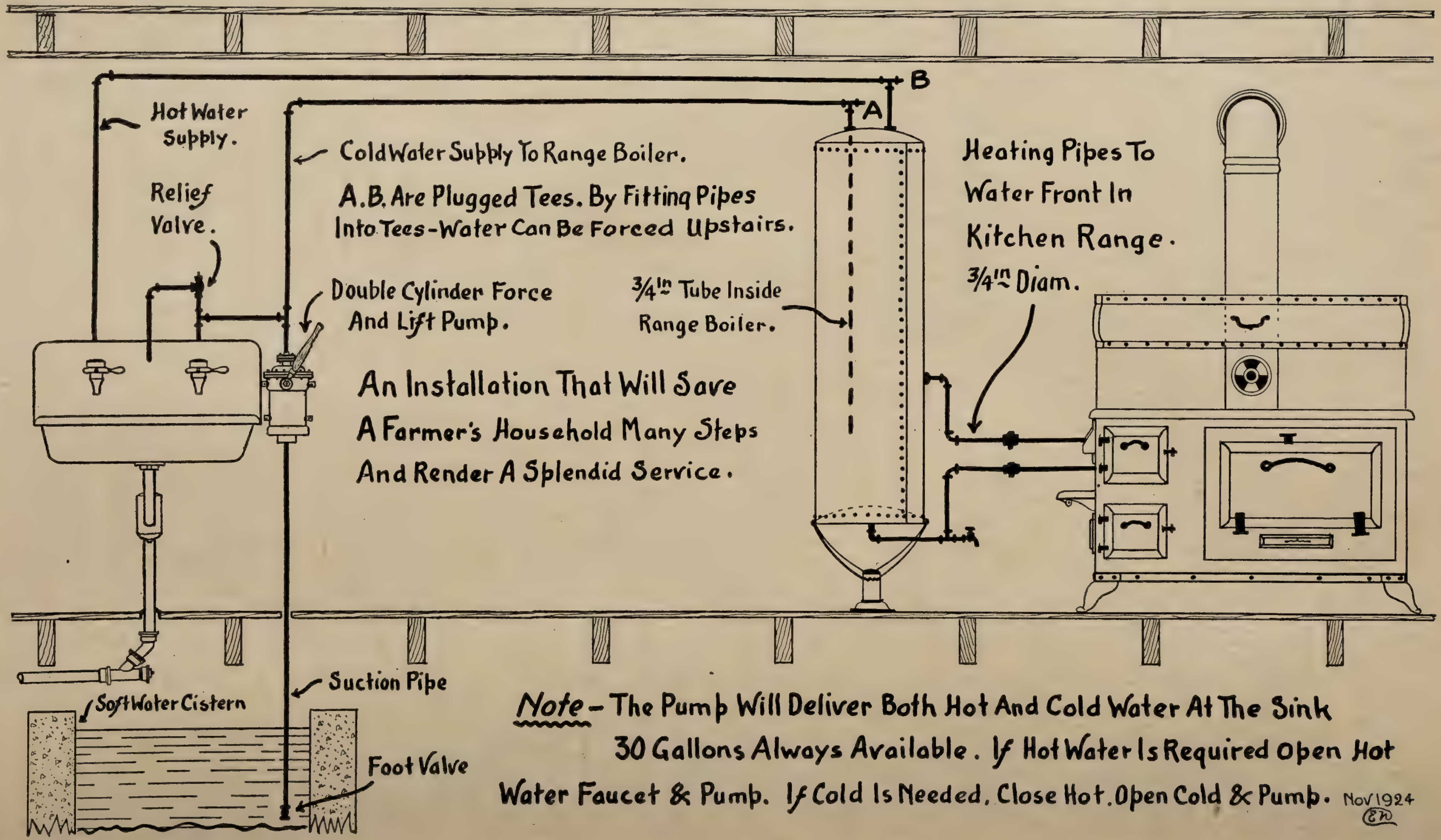
I AM inclined to believe that the average person, be he or she a student of an Agricultural College, University, or even one of those who, like topsy, have "just grown up in the common conditions, as we find them," have not given this subject of rural sanitation even a passing thought, in its broader sense.

Rural Sanitation, and all it implies, is without doubt Canada's most important factor, and the more one delves into the details the more one is convinced that cleanliness is next to godliness. One can pooh, pooh, as one likes, and remark that their grandfather's lived till they were a good old age, etc., etc. Yes! No doubt they lived. But what is living? As they lived, they existed only on a little higher plane than the cattle in our present day cowbyres. And that is one reason why the present farmer is not the man his grandfather was because his grandfather drew on posterity, as it were, and bred weaker children than he would have done had he been in a position to adopt such sanitary methods as are available for us all to-day.

I venture to state that if the Mothers of the present generation of farmers had had the opportunity of using sanitary fixtures and had had water on tap, we would not now be faced with the fact that far too many farm boys and girls are leaving the farm, and it is for the agricultural student, and those who have graduated from agricultural colleges to be the forerunners in deciding that every farm shall first have a home fitted up with every city convenience possible, because they are the men and women who must repopulate our farms as well as add the natural quota to carry on industries other than those that are directly of an agricultural nature.

It is all very well, to say, "Oh, that's all right but a farmer can't afford all such conveniences at a start. Such an

A Simple Hot Water System - Cistern Pump Connected To Kitchen Range Boiler.


B
A
Hot Water Supply.
Relief Valve.
Cold Water Supply To Range Boiler.
A.B. Are Plugged Tees. By Fitting Pipes Into Tees - Water Can Be Forced Upstairs.
Double Cylinder Force And Lift Pump.
3/4 in. Tube Inside Range Boiler.
Heating Pipes To Water Front In Kitchen Range. 3/4 in. Diam.
Suction Pipe
Soft Water Cistern
Foot Valve

An Installation That Will Save A Farmer's Household Many Steps And Render A Splendid Service.

Note - The Pump Will Deliver Both Hot And Cold Water At The Sink 30 Gallons Always Available. If Hot Water Is Required Open Hot Water Faucet & Pump. If Cold Is Needed, Close Hot, Open Cold & Pump. Nov 1924 argument will not hold water. If the present health authorities demand that every city dweller shall have his home fitted up with a modern bathroom—and they do—why not put the farmer under the same law? He is our most important citizen. If his living conditions are not sanitary everybody else suffers. I am not wanting to infer that because farmers have not bathrooms in their home that present citizens who dwell in towns and cities suffer directly, but indirectly they do. And it is a mistaken idea that a farmer cannot afford, etc., etc. As a matter-of-fact this generation is suffering more as a result of thinking so, than anything else.

I know of farmers who borrowed money early in their carreer to install plumbing fixtures in their home, and every son and daughter of those farmers are either still at home or have married farmers' sons and daughters. Their mothers had a chance. She was not a drudge, doing all manner of chores that she ought not to have done, during certain periods of her life. She didn't have to carry, lift, pump something like two tons of water a week.

And the results are very gratifying. Splendid sons and daughters, that are making farm work pay. The mental attitude of people living under the average conditions prevalent on a farm cannot possibly be as desirable as if every unnecessary step or chore was illiminated, and now I will explain just what rural sanitation means, what it stands for and what is involved in cash to have a farm properly equipped. Before doing so, however, I'd like to tell you what I think thrift is, because I've an idea that ninety-nine and nine-tenths think that thrift is doing as the average person is doing, viz.:—scratching and scraping, doing without all kinds of things, as the average farmer is doing, so as to save money. Bosh!! Look at our retired farmers, to-day. Are they happy? Not at all, they are a blight to every community they ever "park" in. Why, because they did without the things they needed when they were young, so as to save money for the things they don't need now they are old.

I am not making these statements with any feeling of disrespect, but rather am I sorry that such is the case. The man who has got tired of his job, one that has been his life's work is an object worthy of sincere sympathy. So, let me just pass on the idea that thrift is not a matter of saving money or of doing without those things we need when we are young. But thrift rather, is using money and things to the end that we will live lives of usefulness, be proud of our job, and learn to love our work for the work's sake. In other words to see to it that this world will be a better world to live in because you, John Jones, or Miss Brown, once lived in it.

THE FIRST STEP TO TAKE

Having written a somewhat long introduction, I do not purpose continuing my preachments in the same tone, but rather will explain a few things regarding the technical part of rural sanitation.

In the first place when a farmer moves on to new land, he first procures a water supply. He must either dig, drive or bore a well, or he must build a cistern and collect all the soft water he can. Quantity and quality must be at all times available. And if a well is to be made, it should always be as close to the house as possible. Because the surroundings of the home should be the most sanitary location on the farm.

If at all possible the well should be located on the north side of the house, there is a reason for this as will later be explained. Next a good large soft water cistern should be built, too, on the north side of the house, well underground and protected, and not less than 4-inch wide galvanized iron, eavestrough placed all round the eques. These should be kept clean, and a screen fitted into every opening at the top of the conductor pipes. See sketches that will appear in future articles.

The size of a cistern is a very important detail. It should be sufficiently large to hold 15 gallons per person per day for a period of 60 days. The size being calculated to hold water, being the cubic contents between the bottom of the cistern to the lower side of the overflow pipe. The position of a cistern should be so that it will not be inconvenient to build another by its side, if in later years a larger supply is necessary. These cisterns ought to be cleaned out periodically, the most suitable time being when the water is low. I omitted to say that a cistern can be built in the basement, but outside is best.

The next matter to consider is simple and low-priced, yet sanitary conveniences, and to my mind, a kitchen water system, hot and cold, at each faucet is the least that can honestly be provided. The lady of the house can be saved many steps by such a system.

Figure one, is a simple outfit, any handy chap could install such a system, and note how it works. First, close the cold water faucet and the faucet at the bottom of the range boiler. Then open the hot water faucet and operate the pump until the range boiler is full and cold water flows through the hot water faucet.

This will indicate that the system is full of water. Then close the hot water faucet, build a fire, see that the relief valve will blow off at about 15 lbs. pressure. It will now be noted that to procure hot water, open the hot water faucet and pump. If cold is needed, close the hot faucet and open the cold and pump.

This little outfit is the first step, one that will save the lady of the house hundreds of steps a day, and there will be 30 gallons of water on tap, all the time.

No reservoir on the kitchen range is necessary. No slopping of water all over the floor, and every pipe and fitting is in the right place ready to add the bathroom fixtures later. Next article will deal with the laying out of a bathroom. Pipe sizes necessary and how to hitch the system above described to the modern bathroom.

1925 Conversazione

The "Conversat" will be held in the O. A. C. dining hall, on January 30th, 1925.

Invitations may be obtained by ex-students on application to W. B. Reynolds, O. A. C. Guelph.

THE OAC REVIEW
ODELL

REVIEW STAFF

A. E. DAVEY, '25, *Editor-in-Chief*
HERBERT HANNAM, '26, *Associate Editor*

C. E. FREEMAN, '25, *Agriculture.*
W. A. WEBBER, '25, *Experimental*
FRED. GREGORY, '25, *Horticulture*
WM. HANSLER, '25, *Poultry*
J. J. BRICKLEY, '26, *Farm Power*
W. B. REYNOLDS, '26, *Alumni*
MISS K. B. SCOTT, *Mac. Rep.*
J. M. S. LANG, '26, *College Life*
BRUCE MEDD, '26, *Athletics*
BASIL BLEWITT, '27, *Locals*
F. C. MOYER, '27, *Art*
R. HURTUBISE, '25, *Apiculture*

EDITORIAL:

The Old Order Goeth

WITH this number nearly ready for the press, the editor heaves a sigh of relief as the responsibilities of his position lift from rather shaky shoulders. Before laying down the quill and scissors, however, opportunity is here taken to extend our appreciation to those who have helped in the work of publication during the past year.

It was hoped to make The Review to the greatest possible degree, interesting equally to undergraduates and alumni, and it has been felt that the undergraduates' interest has not been what it might, owing to the paucity of contributions from students. For the next twelve months the burden of publication falls on the present associate editor, Mr. Herbert Hannam.

Mr. Hannam undertakes the work on comparatively short notice. He has been connected with The Review for but three months. However, within that time he has taken an active interest in all the details of the work, and he has displayed energy and enthusiasm that are sure to make his term of office one of success. But we take this opportunity also to ask for the incoming editor all the assistance, from the student body, necessary to make The Review, not only a success, but an outstanding college publication. Nobody can accomplish what he would, unless those for whom he works are prepared to show their interest and help along the good work.

The Mail Box

TO THE EDITOR:—

The question of a "Weekly News Sheet," which was raised by Mr. Goring in your October number, while not a new idea, as he himself admits, is nevertheless one, consideration of which causes one to wonder that it has never been seriously undertaken in our college.

Practically every High School and Collegiate Institute has a news sheet to-day, as a means of making their announcements, advertising and keeping alive their school activities and otherwise spreading the good word "while"—as the Globe puts it—"it is news."

There is not one of our college societies but would welcome the advent of such a sheet as a means of keeping their particular activities before the student body. At the present time there is no way of bringing any matter requiring immediate attention before all those concerned, excepting through a student body meeting called by the Students' Council. We haven't any forum where things can be threshed out and the result is that many matters badly in need of such treatment go by the board for want of an adequate means of getting them into the limelight at once. That The Review does not fill this function is painfully demonstrated by the almost entire absence of anything of this nature within its columns.

Then there is the question of college activities, which are never reported at all, because as Mr. Goring has already pointed out, the news would be stale before it reachs the readers. It is impossible to keep in touch with all the present day college life without some medium for broadcasting the news.

The question naturally arises as to what extent The Review would be supplemented, or supplanted by such a sheet. It would almost seem wise to make it a quarterly, instead of a monthly publication. The more immediate interests of the student body, which are now represented under College Life. Mac. Hall news, Athletics, Locals and Editorials would naturally increase many times when transferred to the news sheet. The more technical articles and material of particular interest to our Alumni, supplemented by reprints of such material as is of permanent interest from the news sheet would make up a quarterly publication emminently worth while.

Such an arrangement should render it unnecessary to increase the subscription price while at the same time increasing the efficiency and value of our College press.

—JUSTAFAN

MR. EDITOR:

DEAR SIR,—Are we behind the times? Is the O. A. C. an insignificant college reposing in some distant backwoods, a College composed of students who do not want the name and activities of his or her Alma Mater spread far and wide?

As a student of U. C. addresses the Editor of the 'Varsity regarding the Torontonensis, "I hope something will be done, and quickly, about the monument of coated paper and senseless ornament that seals the undergraduates' grave every June." At present I do not wish to refer to our "Year Book," but to the O. A. C. Review, to which I think the above statement could be directed very appropriately. As a monthly or quarterly giving us general information the O. A. C. Review would fill the purpose very well. However, it certainly does not give us the daily news of our College Life, which the O. A. C. students hunger for.

Mr. E. T. Goring's article, headed "The Weekly News Sheet," published in the October issue, has started the ball rolling. Let's get together and help to put our College on the map and not assume the name Cow College.

A weekly newspaper would do away with the reading of activities, which have grown musty with age. For instance, the Hallowe'en dance was held on October 31, and we shall probably be reading about the gorgeous event about December the fifteenth, when Year '26 are making plans for the Conversat.

The weekly paper would also do away with the reading of rugby, football and English soccer activities in the middle of basketball and hockey season.

A small College in N. B., having an enrolment of about 450 students has a weekly paper called the Argosy, and it is a great success.

Would it not be a crowning success if the present Review staff were to edit and publish our first weekly paper. More members could be added if necessary.

Let's go, College!

Yours truly,
J. E. RIDLEY.

The Editor,
O. A. C. Review.

Dear Sir,—It would appear that some of the maidens of Macdonald Hall are laboring under a most unfortunate delusion. We are informed in a protest from a feminine Solomon that they believe the customary after-dinner array of trousers at the dining hall entrance to be tangible evidence of a plebeian interest in things feminine. The ladies suspecting such are of course indignant, hence this letter of explanation.

We are indeed grieved to think that they consider us so degraded as to hurl away precious moments in such an inane pastime. Were we students in Art our close inspection might be justifiable, were we ancient bachelors with longings for a household, such action would be quite within reason, or if we were theatrical magnates engaged in selecting a chorus we might even be applauded—but students in Agriculture—O Tempora! O Mores!

We beseech all damsels who are entertaining such a pernicious belief to bend towards us a receptive ear that they may learn the truth and reinstate us as befits our intelligence.

Be it understood that we are not engaged in making mental dissections of each Macite as she implants her dainty extremities on the stairs and commences her voyage to the portals of her domicile. It is indeed unfortunate, however, that some of us, as we discuss religious, racial and international problems are so engrossed and absent-minded as to allow our eyes to veer in the direction whence floats the sound of her fairy footsteps. For this we would humbly apologize and crave forgiveness, hoping that this explanation will be enlightening.

May we venture to trust that in future the troubled ones will realize with broadened vision that the dining-hall entrance is the only place where students of both residences may meet without special arrangements, and that the discussions of such students are not as supposed on bandeaux, bobs and hosiery, but on the Egyptian exchange and kindred subjects of profound and universal interest.

Thanking you, sir, I have the honor to be,

Yours truly,
Percival Rhys-Higginbotham.

EDITOR REVIEW:

DEAR SIR,—In your November issue of The Review, a letter was published from a Mac-Hall correspondent, in which was voiced a complaint regarding the custom of many O. A. C. students endangering their health and unnecessarily wearing out the dining-hall steps after meals, by standing at ease along the line of exit, and embarrassing the girls by bold, sly or modest stares at them as they make their departure for their domicile of mystery.

It is not my purpose to deny that this habit of the boys is all that it should be in their disregard of the possible feeling of some of those delightful visions that flit so gracefully and all too quickly from one side of the campus to the other and back.

It is hardly possible that our local Queens of Sheba would deny after powdering their noses before the mirrors that our Solomons have not great and constant provocation to exercise their sense of the aesthetic by attempting to satisfy their love of beauty, grace and charm at the altar of the dining-hall steps, where, alas! unfortunately in the process it seems necessary to sacrifice the refined and sensitive feelings of the entrancing and bewitching nymphs who flash timid and angry glances from their translucent orbs at those whom they seem pleased to think of as their torturers.

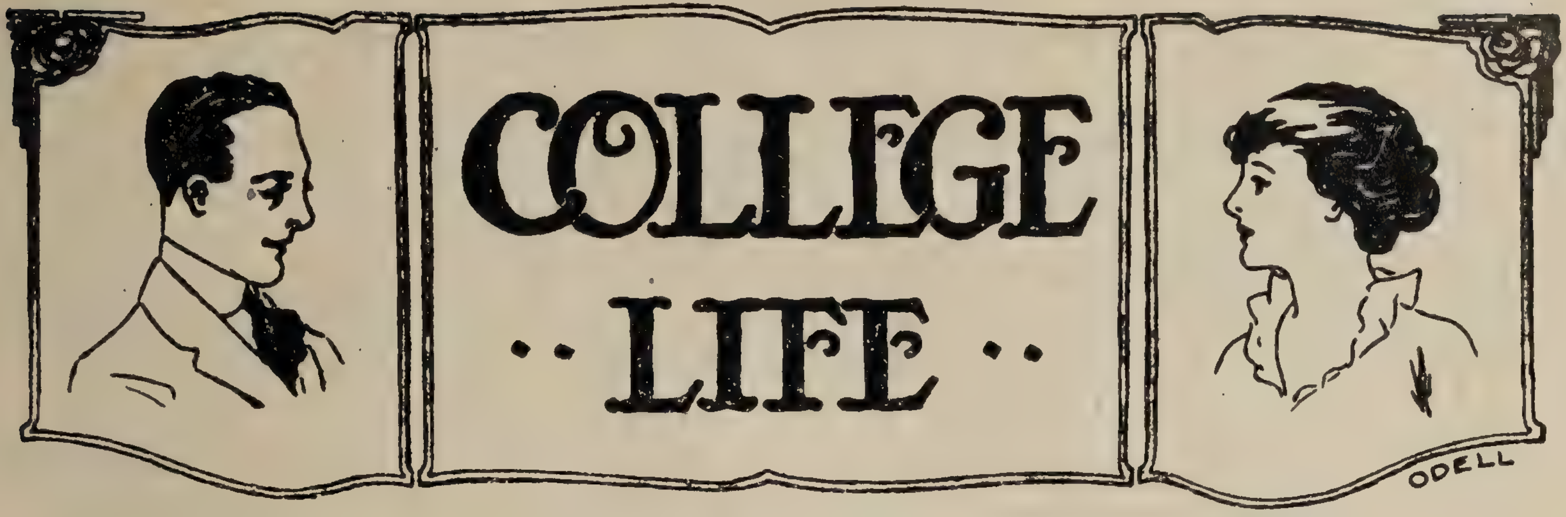
It is sad that the Mac girls take offence at this custom. It is one of the few means we have of showing our admiration for them by risking our lives in the inclement weather and a hurried bolting of meals in order that no single sylph should depart without having the homage paid her that is her birthright.

Thanking you for this space in your columns, I am

Yours very truly,
WILLIE P. IFFLE

ANOTHER WATERLOO

He removed his coat, his collar, and tie;
He rolled up his shirt sleeves. He was a husky guy.
The strength of a Hercules was his,
And the confidence such great strength gives,
Fearless and bold was the light in his eyes,
A light that feared nothing, that never said die.
He brought forth his instruments so shiny and bright,
Scalpel and scissors, plus needles and knife.
His face spoke purpose and high resolve;
No pity the victim from him could evolve.
A swift downward plunge with a glittering knife—
The earthworm was doomed. Grade A for his strife.



Union Literary Society

THE second meeting of the Union Literary Society was held on Friday, November 14th, in the Memorial Hall. Dr. O. J. Stevenson was in the chair. The College Orchestra was in attendance, and opened the programme with a selection. This was followed by a song—"The Four Leaf Clover"—by Miss Winifred Bell, which was much appreciated.

Then came the Inter-Year Debate on the subject "Resolved that the Proximity of the United States is Detrimental to Canadian Farmers." The affirmative was taken by A. J. Grisdale and C. E. Toole, of Year '27, and the negative by E. C. Beck and H. G. Tillman, of Year '28. The first speaker for the affirmative was C. E. Toole. He brought up the point that the United States places on the Foreign markets much the same produce as does Canada, but that, owing to their larger home market, they are able to do so at less profit, thus lowering the prices for Canada. He also spoke of the number of injurious insects pests which come over from the States into Canada. He was followed by H. G. Tillman for the negative. This speaker dwelt on the benefits derived by Canada from the large numbers of agricultural inventions which are put out by the Americans, also from the research work carried on by their universities, and thirdly, from the fact of Canadian students being able to take post-graduate work in the American universities.

The second speaker for the affirmative was A. J. Grisdale. He spoke of the effect which the proximity of the United States has on rural depopulation, saying that men were leaving the country in order to obtain higher-paid positions across the border. He also said that many immigrants went to America who would otherwise come to Canada. E. C. Beck, the last speaker, dwelt on the benefits accruing in a social way from having an English-speaking nation as a neighbour, instead of a completely foreign country, mentioning, also, the protection which the States could afford in case of a foreign invasion.

The judges were the Rev. J. A. Mackenzie, of Guelph, Prof. H. L. Fulmer, and Mr. O. McConkey. Their decision was announced by Prof. Fulmer, at the end of the meeting. He said that the speakers had all handled their subjects well, but that the judges had been unanimously of the opinion that the debate must go to the First Year.

After the debate the Orchestra played another selection. This was followed by a playlet entitled "Sham." This was the first of a series which are to be put on at the meetings of the Union Lit.

under the auspices of the Philharmonic Society, the idea being to give different individuals the chance of producing and managing a play, and also to give as many people as possible an opportunity of taking a part. This will save College Dramatics from being entirely the work of one man, and will help to develop individual talent. "Sham" was produced by B. Blewitt, and the cast was composed of: O. A. Lemieux, as a thief with somewhat revolutionary ideas about his trade; E. T. Goring, as the master of the house; Miss Helen Thompson, as his wife; and W. G. LeMaistre, as a newspaper reporter. In spite of the fact that the time available for rehearsals was somewhat limited, the play was a great success, and reflects great credit both on the producer and on the players.

After the conclusion of the play, Prof. A. Leitch presented the '05 Scholarship to J. Marshall. The meeting ended with the National Anthem.

The Fourth Year Dinner

The members and several ex-members of Year '25 met at a delightful dinner in the Dining-Hall on Saturday, November 18th. After full justice had been done to the abundant supplies of chicken and pie which were provided, Mr. Maclean, who was toastmaster for the evening, took charge of the proceedings, and called upon us for a toast to the King. Dave Andrew then proposed the toast of "The College," which was responded to by President Reynolds. Then Mr. Maclean said that in the absence of Mr. Spencer—the Hon. President of the Year—he had been asked to propose the toast to "Year '25." This was responded to by Frank Parish, the Fourth Year President. Prof. Graham was then called on for a speech, at the conclusion of which he introduced two friends—Mr. Sewell, the great poultry artist, and Mr. Richardson, who each said a few words.

The party then adjourned to the Gym. where the College Orchestra was waiting for us, and dancing became the order of the day. Although it was somewhat cold at the beginning, a long Paul Jones soon warmed everybody up, and the fun became fast and furious. A plentiful supply of confetti and streamers added to the general excitement. The dance continued until 11.30, when we reluctantly departed homewards, feeling both mentally and bodily at peace with all the world.

MACDONALD

Chemistry and the Household

By PROF. H. L. FULMER

A REQUEST has been received for a few lines stating, or possibly illustrating, what relation, if any, exists between chemistry and those homely arts and practices which we so frequently refer to more or less broadly as Household Economy or Domestic Science. I do not know if this expressed desire for a statement on such a subject has had its genesis in a doubt as to whether such a relationship exists, or whether the editor is simply in need of copy. It may be, on the other hand, that an impression has been gained that the Science of Chemistry in some way or another can aid the household practitioner in the performance of her or his duties, and that a knowledge of it can lend an element of interest and pleasure which would tend to relieve in some measure the somewhat drab monotony of the inevitable and eternal round of cooking, dish-washing, scrubbing, laundering, etc., to be found in every home.

I take it that the latter largely explains the position of the Macdonald Hall representative on the editorial board of The "Review" and hence that a short resume of the way in which chemistry makes contact with, and can aid in the conduction of, the duties of of the home is what is wanted.

Now it happens that some one had defined chemistry as that branch of natural science which deals with the composition of matter and of the various changes in composition which it is constantly undergoing through the influence of various forces. And this states the case fairly concisely, if not completely. Of course everything cannot be included in a definition; if one attempts to do so the whole thing becomes too cumbersome and the main object—clarity—is foundered. However, let it be understood that some of the appurtenances which go along with chemistry in many cases produce our most important aspects from the standpoint of utility and interest. For instance, a knowledge of the laws and conditions which govern chemical changes are often of utmost importance and their application of the greatest value. Sour milk will act on baking soda and liberate the necessary leavening agent, but the degree of the leavening and the amount of the baking soda left over to taint and discolour the biscuit is determined by how sour the milk is. Too little sourness results in poor leavening and that off-colour and brackish taste. Chemical changes are not hit and miss, but beautifully regular, and take place between definite amounts. This is what we call the "Law of Equivalence or Reacting Weights."

It's funny you can't set sugar on fire with a match isn't it?— Everybody agrees that it is funny, so funny that it isn't believed. Sugar is food and all foods, nearly, are combustible if they are not too wet. Sugar is a carbohydrate and therefore belongs to the same family as paper and wood. Why shouldn't it burn? Set up a domino on your saucer and hold a match to one corner of it. But all you get is a dull smoulder and a bad smell. The sugar softens, blackens, but refuses to inflame. But it will burn and the only thing funny about it is that you can't make it do so. I can. I drop a little of my cigar ash, if I smoke, on it, or carelessly slip it into the ash tray for a moment, touch a match to it, and presto! it promptly blazes up and goes on burning with a sooty flame.

What did I do? Simply added a little catalyst and illustrated one of the potent forces of nature in setting up and regulating chemical changes. It has been found that in many cases the presence of a minute amount of an inert substance, like the ash here, will greatly accelerate a reaction and yet is not used up in the process. The chemist calls this "catalysis." Finely divided metals often act in this way. A little finely divided nickel added to cottonseed oil, a cheap but useless article for the larder, will make it combine with hydrogen and lo! we have "Crisco."

Soap is one of our great detergent agents, but every housewife knows that hard water is hard on soap. Why? Simply because there are soaps and soaps and only those which are soluble in water are effective. Now most laundry and cleaning soaps are made by combining fat or oil either with caustic soda or caustic potash, the latter giving soft soap and the former hard. Either kind is soluble in water and thus produces the desired effect. But, if put into hard water the lime, or magnesium, or iron or aluminum salts in the hard water form the corresponding soap and by virtue of their insolubility in water we get a curdy, sticky sediment settling out and an equivalent amount of the good soap is rendered useless. And what is just as bad, the wash basin becomes fouled and we get "rust" spots on the ironed laundry.

For many years it has been known that proteins, such as white of egg, gelatin or casein of milk, were absolutely necessary constituents in animal nutrition for the growth and repair of tissues, and that proper nourishment of the body demanded that the ration contain a certain proportion of them. If they were absent dire were the results. It has also long been known that of the hundred or more proteins available some are almost useless, some mediocre, and others again nearly perfect, for example keratin, gelatin and casein respectively. Why? Emil Fischer and others cleared that up by showing that the proteins are constructed, like anything else, out of something, and these somethings are the amino acids, so called. Now the animal body requires round about a dozen and a half of these amino acids and if a protein does not supply enough of each one of these, or perhaps some of them not at all, then the body wastes away and dies, because the animal cannot manufacture them for itself.

What would happen to the vinegar in the decanter if the stopper is not kept in when not in use? Many a man has set away a fine barrel of excellent apple cider, dreaming of the day when he would have enough elegant vinegar fo for all his own needs and those of his neighbours. But by a little mistake of technique he left out the cork too long and his vinegar became, in due time, very good water and all the lovely hard cider which was present at one stage of the game was lost forever to humanity. A sad state of affairs in this day and generation. If he happened to be a wise man, of course, he extracted a good portion of the contents of the barrel during its passage through the "hard" stage. However, the whole question is merely one of simple chemical change. When the vinegar has once developed it must be kept studiously bottled up from the air or else it absorbs oxygen from this source and changes into carbon dioxide and water. And we have an ample natural supply of both of the latter without going through this laborious and expensive process to get them.

Old rags! Yes, most of my clothes are old rags, and faded at that. But by a little care and thrift they may be salvaged yet for a few more years of wear. At least the colour can be replenished, for there are dyes to be had, and one can get almost any colour or shade the fancy dictates. Of course, it makes a difference whether it is cotton or wool that my rags are made of, because wool will take almost any dye, but cotton and artificial silk need a little persuasion. There is a difference in their chemistry. However, it is the great choice of shades and colours that particularly interests me, and Joseph's coat would not be in it for a minute. It was not ever thus, for only a life-time ago not more than a dozen colours were procurable, and no shades at all, hardly. But now there are several thousand. Perkin started something when he made mauve artificially in 1856, and now coal tar is more valuable than it was when it was allowed to find its way into the dump heap along with many other useless (?) by-products of that chemical medieval age. It has even been made to yield most of the original dozen and of a much higher purity and at a far cheaper rate.

One cannot neglect mentioning the fuels and illuminants. The hydrocarbon (hydrogen and carbon) compounds such as gasoline, kerosene, acetylene and so on, are very prominent here, and crude petroleum with which America is so richly endowded, and the electric arc so economically aroused to the tune of Niagara's mighty roar, are the fond parents.

Speaking of hydrocarbons reminds me of a conversation of two gentlemen I once read about. It took this turn:

"How is Robinson?"

"He is in a bad way."

"Is he ill?"

"No; it is business. You know that petroleum product he has been advertising?"

"Yes; I thought it was a gold mine."

"Not exactly that, although it is an excellent thing, but something has gone wrong with it and the stuff is coming back to him by the carload. Smells like kerosene, and people don't like the taste of it."

"What is the matter with it?"

"They say it is olefins."

"Ole Fins? Who's he? Is he a Swede?"

Now gentle reader, olefins are simply a kind of hydrocarbon and they are mighty fine fuels and very good illuminants, and although the name does savour somewhat of the Nordic no housekeeper who had studied chemistry would be so easily snared.

But, as I said before, chemistry is the study of the composition of matter and its changes, and nothing more need be said. Matter is everywhere, for it is that which has weight and occupies space. All that we eat, wear, breathe; the utensils in, and our dwelling; all ornaments, crawling things and flowering shrubs have composition. They are made of something. If we know of what, and the laws which hold them together and pull them apart, then we are in a better position to manipulate and control them and, what is still more important, to enjoy them.

Let us sum up: "Chemistry is not only the intelligence department of industry; it is everywhere, and we cannot get away from it. Every kitchen is a laboratory, every baker a chemical manufacturer, and every butcher is a chemical warehouseman. Chemistry washes us, launders our clothes, and bleaches and dyes them; it provides us with metals, with our morning paper and with books; it helps the farmer to grow our food; and when all is over, whether we be burned to ashes or buried in the ground, it is by chemical processes that our bodies go back again into the great order of things."

Alumnae

Miss Peggy Van der Westhuizen, 1924, is now in South Africa.

Miss Velma Rosettenstein is taking post-graduate work at Teachers' College.

Miss Rhea Peever, '23, is at the Hamilton Normal.

Miss Helen Brown, '23, is studying at Columbia.

Misses Jackson, Pritchard and O'Neill last year's graduates, are taking their pupil work at the Bloomingdale Hospital, N. Y.

Miss Grace Blythe, one of last year's short course students, has been back at the College several times.

Among the Mac. Hall alumnae who came back for the Hallowe'en dance, were:—Misses Margaret McBurney, Rita Williams, Gladys Eaton, Dorothy Dancey, Margaret McGlashan, Ruby Evans, Pauline Dixon, Helen Southcott, Maisie Millichamp, Elizabeth Ramsay, Florence Coatsworth, Phyllis White, Guida Burton.

Miss Olive Chown, of Kingston, graduate of '23, is travelling in Europe.

Miss Frances McIntyre, is on the Faculty of the Science Dept., at the Acadia Seminary, Wolfville, N. S.

Miss Marion McLuhan, is teaching household science in Toronto.

Miss Ruth Rix, a last year's graduate is teaching household science in New Westminster, B. C.

Miss Jennie Treacy, another graduate of last June, is teaching household science in Calgary.

Miss Elizabeth Hardy, '23, is dietition in the School for the Deaf, Rochester, N. Y.

Miss Constance Davis, '23, is assistant dietition over at the Dining Hall.

Miss Evelyn McLean, '19, is dietition at the Sick Children's Hospital, Detroit.

Miss Margery Bell, '22, is with the Nutrition Clinic at Halifax

Marg. Mooney, Mildred Pritchard, Mattie Newman and Jean Robertson were at the Hall for the week end of Nov. 16th.

Miss Mary Conn has a position at the Windber Hospital, Windber, Penn.

BASKETBALL

Basketball has taken a new form this year. Previous years we have played boys' rules only. But on the advice of Miss Pepler, the Girls' Athletic Executive decided that this year Macdonald Institute would adopt Intercollegiate Girls' Rules.

The Executive is endeavouring to arrange a meet to be held in Guelph about March 1st in which teams from Western "U.", Varsity, and Macdonald Institute will compete. If this can be made possible, and there's no reason why it shouldn't, it will surely prove a much anticipated event in our sport life.

So far, there have been very few real practices, but it is our intention to get a good start in basketball before Christmas, and there's no reason, since we have excellent material among the Juniors, that we cannot have a winning team, this year.

Mrs. Reynolds entertained the Seniors at an afternoon tea at her home, Wednesday, November 19th, and the Juniors in the same manner, Wednesday November 26th.

SWIMMING

Swimming should be a very important branch of athletics this year. There are a great many more interested than there ever have been before, and several classes are already working on the life-saving.

Miss Pepler is organizing a beginners' class which will begin very soon.

Some of the girls who obtained the bronze medallion last year are instructing small classes in order to get their Honorary Instructor's certificates

There have been a few practices, but the examination will not take place until after the Christmas holidays.

Locals

Mr. Gibson—"Can anyone tell me what hard water is."

Bright One—"Ice."

Marg. (after meat demonstration)—"And was the other side of the cow just the same as that one?"

Frank (trying to sing)—"Oh, it ain't gonna rain no more, no more."

Glad—"That's a parody, isn't it?"

Glad—"If you were in a car and going to run into a train, what would you do?"

Mickey—"I'd blow the horn."

Glad.—"Did you hear of the awful hanging at College?"

Dot.—"No, What are those men doing now?"

Glad.—"Two girls hung their stockings on their chairs before they went to bed last night."

You know the College is the awfullest place for accidents. The street car ran into it the other day.

Tiny—"Do you like Antiques?"

Bud—"Yes."

Tiny—"Have some beef."

I still think as I always thought,
That kissing is very wrong;
And I'd resist, about to be kissed,
But gee—you look awfully strong!

Miss Bradley—"We use potatoes —?"

Glad—"Often?"

Miss Schenk—"What goes round a button?"

Isabel—"A Billy goat."

If you want to learn a few (eccentric) new dance steps go down to the gym. and watch the boxing.

Set to music, some of the steps would be quite the oil.

No, John, there hasn't been a fight over at the Hall. Didn't you know the basketball season has opened.

Are the enthusiastic hikers who used to speed around the five-mile block before breakfast worn to shadows, or have they desided that it doesn't do any good.?

After listening to the debaters at the second Lit. we would like to know, who was for the farmers and who for Canada?

Professor—"Can you tell me who succeeded Edward VI?"

Jean—"Mary."

Professor—"And who followed Mary?

Jean (absently)—"Her little lamb."

BAD WORDS.

George, Mable tells of a very devout man whose swear word is keokuk—because that's the biggest dam in his knowledge.

That's all right for dam, but for a polite expression of disgust, Toronto "Varsity" is useful.

Helen—"It's not bad being a secretary. All you have to do is write the moments."

"That's not so bad, unfortunately you have to write the moments, too.

Second Childhood

The annual Baby Party was given this year by the Literary Society on the evening of Novermber 20th, and if noise were any indication, it was a "howling" success. Children of all sizes and shapes attended, and from every walk of life. There were aristocratic infants carefully guarded by a uniformed nurse,—there were disreputable little urchins who apparently had strayed in from the toughest ally in the neighbourhood. Some behaved like mothers' pets, others like little divvils. At intervals, when some sort of law and order prevailed, the good old games of "London Bridge" and "Little Sally Waters" were played with an enthusiasm which it did one's heart good to see. The costumes all displayed so much ingenuity, and were so effective, that the judge's task was a difficult one, but the prizes finally went to a striking young lad and his dainty little companion. In other words Jean Clark and Marjorie Read. The wee tots dined royally on lollipops, "400," and large ginger cookies. Several were heard to emphatically state that they were going to eat all they could, "even if mother did say 'no second helping,' "

WHY I CAME TO MACDONALD HALL

When I went up for my examinations in June, I wrote them as the necessary means of entering Varsity in the fall, and the idea of coming to Mac. Hall for a year had never entered my head. In fact I had always rather scorned the idea, and taken every opportunity of teasing any of my Mac Hall friends most unmercifully about "these fortune hunters who took the diamond-ring course in order to rope in some poor unsuspecting male."

But fate is ever putting her foot in it, and so it was with me. Now was I to know that she had already begun her insidious plan, when an innocent-looking envelope arrived one morning for my mother. It contained an invitation for my parents to visit some friends at their summer home up north for a week or so. Now, as this necessitated leaving her inexperienced baby—namely myself—in charge of household affairs, my mother was rather dubious about accepting the invitation. "Jean knows absolutely nothing about keeping house and Mary is on her holidays," my mother said with a sigh. Now, I was secretly annoyed that she doubted my capability in the matter, but I answered generously, "Oh don't you worry about me mother, I can surely manage to scrape together a few meals until you come home." My father sided with me, with the result that my mother was forced to give in though much against her better judgment.

They left on a Monday morning after

breakfast. How well I remember the feeling of pride with which I waved them out of the house and took full possession. My feeling of exaltation changed rather to one of disgust, however, as I returned to the dining-room and viewed the alarming array of unwashed dishes still on the table. Before in my young life dishes had always seemed to quietly and noiselessly take themselves back to the cupboard where they belonged. Not so to-day! They sat there stolidly and seemed to challenge me to do them if I could. Whereupon I gritted my teeth and set about my task.

After an interminable length of time I finally had them packed up in the kitchen only to find I'd forgotten to put on the dish-water. However, as this gave me a few minutes respite from my weary labours, I didn't mind in the least. In a little while I was hard at it again, washing the dishes, and incidentally scalding my hands in the boiling hot water. When I came to the pans, I balked altogether. I took one look at the greasy pan in which the bacon had been cooked, and then I suddenly conceived the brilliant idea of using the grease to fry the potatoes in at noon, so I left it altogether.

When I had finally finished I found to my horror that it was exactly eleven o'clock—almost time to get dinner. Housekeeping was rather a tiresome round, I began to think. Nevertheless, I sat down to plan my menu. I knew that mother had left a perfectly good pie in the cellar, but I had no intention of using that. I was going to show them what I could do for myself. I decided after much concentration to have a pork roast, fried potatoes, spinach, tomato jelly salad, and rice pudding. I didn't know exactly where to begin, but I could make tomato-jelly—mother had shown me once when she had a tea—so I thought I'd better attack it at once. Everything went well till it was time to put in the gelatine, when I suddenly discovered there was none in the house. I was momentarily dismayed, but as necessity is the mother of invention, I conceived the idea of using starch instead. Whereupon I stirred in a cupful, and found it became amazingly thick, although it was a trifle muddy-looking. This disturbed me not at all, however, and I set it in the refrigerator, feeling very much pleased with myself.

Next I thought I'd better peel the potatoes. As I had never performed this ceremony before, I wasn't quite sure of the procedure. However, I bravely donned a pair of rubber gloves, seized the carving fork firmly, pierced each potato, and with the knife in my other hand endeavored to peel it. You can imagine that with the potato in this precarious position it was rather a wearisome task, but I toiled on unceasingly till I finally had them sizzling beautifully in the bacon grease.

Now I knew the family was very fond of spinach, so I put in at least four leaves a piece and set it on the stove to cook. My next thought was of the tea. As I wanted to be thoroughly economical in my house-keeping, I decided to put on the tea at once, so I could boil it for an hour or so, and thus extract all its delicate flavor. Next came the rice pudding. As I wasn't quite sure of the proportions, I put in about four cups of rice and a corresponding amount of water. Everything was going splendidly!

In a few moments I noticed the rice had risen surprisingly. In fact, it was in great danger of overflowing so I hastily brought forth another saucepan and filled it, putting the rest back on the stove. Before I could scarcely turn around, up came the rice again. I made another frantic dash for a huge saucepan, and filled it just in time. In

Continued on page vii.

Intercollegiate Rugby

ST. MIKES, 4—O. A. C. 0.

St. Mikes win last game of series and carry off Group honors.

Despite the loss of six of the regular team, O. A. C. put up a strong fight against St. Mikes, when they came to the Aggie's stronghold. With only two subs the Aggies makeshift team played one of the best games of the season. St. Mikes' team, almost as strong as ever after the loss of Lebel were hard put all through the game to keep the lead that they had. Conboy booted well, in fact booted his best of the season. All through the game the play was about even. St. Mikes found that they could not go through the College line, so they kicked over it. St Mikes made two points on field goals in the first half and two points in the same way in the last half. In the last quarter Cox, quarter for O. A. C. got a hard knock on on the head, a slight concussion of the brain. Pugh went in, in civies and played quarter until the end of the game. This is the second time that St. Mikes have won the group championship. In this series they lost only one game, and that to Western University.

Interfaculty Soccer

SEMI-FINALS.

Victoria, 0—O. A. C., 0

Victoria played at O. A. C. on Saturday, October 15th, and succeeded in holding the College team scoreless. With fine weather, a good field and a fair wind the game was speedy and full of fast play. Vic., with the wind at their back, in the first half, had a slight advantage, but were kept in their own territory at least half the time. Vic. had a fast moving team, but they were not as good with their feet. During the first half the play ranged up and down the field with few shots on goal for either side. This was not quite heartening to the Vic. players for they had the wind with them. In the second half the College kept the ball in Vic territory most of the time. A great deal of ineffectual shooting by the College forwards saved Vic. from several scores. Near the end of the game the College team worked its hardest and kept the ball in front of Vic. goal continually, but were unlucky in having their left wing weakened. Edge was off and MacKenzie had his ankle hurt. With a full team the College has to win in Toronto, or will not get into the finals.

Line-up for the College:—Goal, Marshall; full backs, Thompson and Hunter; half-backs, Cruickshank, Rintoul and

Medd; forwards, R. P. MacKenzie, Edge, LeMaistre, McFarlane, and K. P. MacKenzie.

O. A. C. Wins Round in Semi-Finals

In Toronto the Aggies played the second of the home and home games with Victoria College. As there was no score at O. A. C. the game in Toronto was the deciding one and each team put forth its utmost during the 90 minutes of play. During the first half Vic. had the wind in their back and succeeded in keeping the ball in O. A. C. territory about half the time. Near the first of the period Vic. scored a goal from a corner kick. This made the O. A. C. men get to work in earnest and although they did not score in the first period they had some good shots on the Vic. goal. The Vic. players were fast runners and they played a kick and run game. This was all right when they had the wind in their backs, but when they faced it in the second half they could do nothing against the combination of the O. A. C. forwards. MacKenzie on the right wing scored a goal on a beautiful shot which hit the far post and bounced in. MacFarlane scored the second goal by taking the ball right up to the goal and putting where the goalkeeper wasn't.

In the last half rain fell, making the ground slippery and the footing uncertain. Many wild kicks resulted, making the game spectacular at times. On this slippery ground the O. A. C. combination showed its superiority and though the Vic players made rushes to O. A. C. goal they could not keep the ball in that territory. Winning this game has put O. A. C. in the finals against either Dents or Knox, who have played four tie games already.

Notes

The basketball team contemplates a tour through some of the nearest cities in the States during Christmas holidays. This should put them in good trim for the coming season. The team should be strong this year as a good many are turning out to practices. And only one man is off last year's regular team.

Many are asking if there is to be an Inter-Collegiate Hockey team next winter. Have we enough men to make an inter-collegiate team after losing six of the regular team last year?

What about a good series of indoor softball this winter? The softball this fall has amounted to nothing and the only fast game of the season was played indoors one night between 3rd and 4th years. Indoor ball seems to create more interest than outdoor ball. The College wants to have a strong College baseball team this year and we believe that nothing could develop players more than a good series of indoor ball this coming winter.

LIFE-SAVING

The following men have qualified for the Bronze Medallion and Proficiency Certificate:

W. A. Young.
L. W. Brennand.
D. B. Penny.
C. E. Christie.

For the Honorary Instructor's and Teacher's certificate:

F. W. Gregory.

An Analysis of the List of The Graduates of The Ontario Agricultural College, 1888-1924.

VOCATIONS

Farming	287
Teaching in Agr. Colleges and Schools, and Agr. Extension and Research work	243
Agricultural Representatives	74
On Experimental Farms	56
Teaching in High Schools	32
Dairying—Government or Commercial	53
Commercial Agr. Firms other than Dairying	74
Soldier Settlement Board	23

ADMINISTRATION

Dom. Dpt. of Agr	33
Prov. or State Depts	23
Agr. Journalists	18
Agr. Students—Graduate Work	22
Agr. or Medical Missionaries	9
Veterinary Surgeons	1
Deceased	54
Clergymen	4
Physicians	4
Army	1
Occupations Unknown	30
Non-Agricultural	71
	1112

LOCATIONS

Ontario	651
Quebec	17
New Brunswick	16
Nova Scotia	25
Prince Edward Island	10
Newfoundland	1
Manitoba	31
Saskatchewan	35
Alberta	45
British Columbia	49
U. S. A	120
England	10
Ireland	1
Scotland	1
Wales	1
Bermuda	2
Jamaica	1
Trinidad	1
Argentine	13
Spain	1
France	1
China	2
India	6
Columbia	2
Porto Rica	1
South Africa	13
Nigeria	1
Liberia	1
Deceased	54
	1112

Number from cities	20.77%
Number from towns	14.02%
Number from farms	60.36%
Deceased	4.85%
	100.00%

Number with Matriculation or Normal Entrance	48.12%
Number with two years or more in High School, but without Matriculation	17.27%
Number with less than two years in High School	29.76%
Deceased	4.85%
	100.00%

Number Married	58.10%
Number Single	37.05%
Deceased	4.85%
	100.00%

O. A. C. Alumni Meet Inquiry Committee—Views on Education.

Extension of facilities for agricultural education far beyond those which now exist was urged upon the Agricultural Inquiry Committee of the Ontario Legislature yesterday at the Parliament Buildings when it heard the views of the Ontario Agricultural College Alumni. Representations were made which recommended the enlargement of the place given agriculture in rural primary schools, the giving of greater attention to rural secondary education and popilarizing of the Ontario Agricultural College by making no tuition charges for the first two years of the course and by limiting the charge for board to three dollars per week. Advice was also given to the Government to seriously consider some plan of rural education which would fit into the five months in the year which so many farm boys could only spare for attendance.

In the matter of elementary schools, the Alumni members believed that text books should be compiled with a view to increasing interest in agriculture, interesting stories being given of plant and animal life and pictures also being given which would foster interest in farm life. In this connection it was urged that teachers' courses should be so planned that the graduates would be able to instruct in the essentials of agriculture. A further suggestion was that a qualified man should be appointed to visit the rural schools and to help the teachers to plan such features of school work as fall fairs and other matters of agricultural interest to the children.

So far as secondary education was concerned, the Alumni believed that the problem was not so much that of giving agricultural as that of giving general education. The view was held that the boy or girl who stayed upon the farm was not being given his or her due in the matter of a general cultural training. Hesitancy upon the part of school districts to establish continuation schools in the face of present depression and existing high taxes was mentioned and it was held that the problem was one which might very well receive the serious consideration of the Government.

Besides holding that the Ontario Agricultural College should charge no tuition fees in the first two years of its course and that the cost of board at it should not exceed three dollars per week, the Alumni urged that consideration be given to the question of scholarships for the institution, to be awarded in connection with the country competition conducted by agricultural representatives. Further suggestion was made that in each department of the college there should be available men to whom the agricultural representatives could submit problems arising from their districts.

A final recommendation of the Alumni was that, in view of the need of farmers for an understanding of business principles and processes, there should be prepared a text book upon the subject to be placed in the hands of district representatives and rural teachers.

The speakers on behalf of the Alumni were S. E. Todd, its secretary; Professors W. R. Graham, A. Leitch and J. W. Kennedy, of the Agricultural College, and District Representative MacVannell.

AMONG THE YEARS

'03—L. S. Klinck, President of the University of British Columbia, recently received an honorary degree of LL.D. from the University of Western Ontario.

'07—G. E. Sanders has resigned his position as General Manager of the Doloro Chemical Company in order to establish a new Insecticide Company at Medina, N. Y. He remains as consultant to the Doloro Company for the time being, but expects to be manufacturing his process dusts at Medina in the near future.

'11—S. H. Gandier has been appointed Principal of the Agricultural School at Claresholm, Alberta.

'23—W. H. McLellan is at the Dominion Experimental Farm at Rosthern Sask.

'23—R. Marston and H. Upshall are taking post-graduate work at Lansing, Michigan.

'23—Jimmie Howard is with the Cereal Division at Ottawa.

'23—Hank Claus is Assistant Manager of the Farm Bureau in Allegheny County, New York.

'23—J. Lawson is at the Central Experimental Farm at Ottawa with the Forage Division.

'23—P. Bratt is District Supervisor for the Beatrice Creamery Co., Chicago.

'23—G. F. Hervey is with the Cornell Extension Service as Entomologist.

'23—C. G. Pilkey is teaching at Milton, Ont.

'23—P. Saunders is with the Hort. Division at Ottawa.

'23—Eric Brink is teaching at Westboro.

'23—Bob Parent is Assistant Superintendent of the Experimental Farm at Fredericton, N. B. J. C. Besnett is at the same Experimental Farm in Fredericton.

'23—E. Hellyer is teaching school at Welland, Ont.

'23—Benny Ward is at Monteith, teaching school.

'23—Frank Carson is with the Mutual Life Assurance Company at Georgetown, Ont.

'23—Bob Murray is with the Hort. Division at Ottawa. Bob was seen at the C. E. F. exhibit at the Royal in Toronto.

Ernest L. Eaton, of Class '20, lately sent in a very newsy letter, (would there were more of the same coming in) from Macdonald College, where he is taking post-graduate work under the Macdonald scholarship for Nova Scotia, and following are the notes included in his epistle.

'24—Ken. Harrison, Macdonald scholar, from New Brunswick, is specializing in Rugby and Plant Pathology. His sturdy backing has aided in making the Macdonald team victorious on several occasions this fall.

'24—R. M. Brooks is endeavouring to solve numerous chemical formulae. He was awarded the Milton Hersey scholarship.

Continued on page x.

POLLYANA IN THE BARBER SHOP

The barber shop has long held a solid and peculiar place in the American scene. As a social centre in the small towns from which most great Americans originally came it was second in importance only to the old-fashioned livery stable.

The latter, with its long, dim vista of stalls, its raffish hangers-on, its lithograph of Maud S. doing the mile in 2.08⅜, its proprietor with his air of a milder Simon Legree and his aureole of having once been connected with a circus, stood, of course, quite by itself. The town's life—it's drama and romance—largely revolved around it. Its ancient hacks carried wedding parties and funerals and met the 12.26 and strangers from afar. The traveling man "from the city" came here for a "rig" ere sallying forth to take orders and break the heart of some farmer's daughter. Long after honest folks were asleep young bloods came clattering in, horses panting and flecked with foam, from goodness knows what adventures. What tales of young romance could not its spindly one-seaters have told—half the town's courting had been done on buggy rides.

The barber shop was no less imbedded in the local life, though its field was more cricumscribed. In the nature of things it was essentially masculine—for how should ladies have hair-cuts and shaves?—and in an aggressive, exclusive, even unregenerate sense. Here if nowhere else, the enfranchised male, his ears soothed by the steady scrape of steel on bristly cheeks, could unblushingly peruse the roseat pages of "The Police Gazette." What are "barber shop harmonies" but those which men alone, have duly worshipped at Bacchus's shrine, find pleasure in braying at the high soaring and patient moon? Papers too lurid in color, too Boeotian in their humor for the gentler taste, found here their resting place and home.

The livery stable has gone—driven out by the mechanistic garage and the banal "filling station." What, may we ask, is now to become of this lesser social shrine, descended on, as it now is, not merely by droves of the opposite sex, but by precisely those pink-and-white, immature layers of it, which heretofore were clustered at the opposite pole? Fancy some Rip Van Winkle shuffling back after a ten year's sleep to the faintly but fondly remembered red-white-and-blue pole, to find the well-worn chairs held down by misses in their teens, while Daisy and Maizie and Pearl, arms about one another's waists, fresh from their marshmallow Sundaes at the corner drug store, demand in their treble accents, "Who's next?"

There is pathos here for those who revere the past; thrusts of authentic, if minor, tragedy. It is, for example, near closing time of a Saturday night. Main street is lined with farmers' automobiles. Man after man hurries hopefully up to Jerry's place for the weekly clean-up, stares for an instant and discontentedly retreats. For Jerry is busy. A "skirt" as they would have said in the old days, is in the chair. Some final touch, some esoteric twist, is being put on her "bob." Far from offending the knight of the shears, the challenging task seems to call forth all that he has of craftsmanship and artistic feeling. He turns his head now this way, now that, whirls the chair about, stands on tiptoe—he might be a painter hungry to catch the dripping wine of a sunset, an astronomer plotting the parallax of a new star.

Shaves are being missed here, but

Continued on page ix.

PROFITABLE FUN

Fun just for the fun of it is no fun at all. Real fun consists in doing something which, while having diversion in it, is at the same time useful. To produce something where before there had been nothing is real fun. To pull a burdock up by the roots, and plant a grain of wheat is fun. To build a bird house and see the songsters make a home in it is fun. To scratch the surface of the soil and scatter flower seeds and see them come up and blossom and glorify the earth is fun. To make a dog-house for Towser and see him snuggle up in it at night is fun. To bed Dobbin down with a thick mat of straw, and come out next morning and find him rested and pawing for his oats, and see him plunge his nose deep into the golden grain and begin to munch greedily and contentedly—little recks he of thorough mastication—this is fun. To walk down in the pasture lot and feel the soft turf springing under your feet at every step and round up the cows and drive them home to be milked—this is fun.

To raise the hood of an automobile and wipe off the engine to clean the spark-plugs, to oil the bearings, to drain the crank-case and see that new oil is poured in—just the right amount—to fill the gasoline tank, and turn up the grease-cups, to tighten the nuts everywhere and put some air in the tires, to take a soft cloth and polish everything clean and bright, and then to start the engine and hear it hum rhythmically without a miss—that is fun. To roll along on a country road and see the changing landscape and hear the exclamations of delight from the dear ones in the tonneau, to overtake a tired barefoot boy with flapping hat-brim, and pick him up and take him wide-eyed to his destination—that is fun.

To wheel a baby-carriage and watch deft feminine fingers tuck the wraps around a tiny, tender, chubby bit of humanity is fun. To go a trifle out of your way to carry a basket of fruit or a bouquet of flowers to a sick friend; to write a letter of congratulation to one who has succeeded, or a latter of sympathy to one who has failed; to say a word of cheer to the despondent or a word of warning to the wayward; to put your arm around a fallen brother and lift him hopefully to his feet; to make a chum of one younger than yourself and enter heartily and sympathetically into his aspirations—to help him plan for the future and then to see that his plans are made to mature; to direct the footsteps of youth and smooth the pebbly path of old age; to slay a slander and leave it prone and innocuous at your feet; to check a bit of gossip before it becomes current, and to send a good word to the uttermost ends of the earth; to speak well of people if you speak at all; to do a kindly act and not let anybody know of it; to get into the thick of thinks whenever wrong is being done, and to stay in till the wrong is righted; to play with children, and commune with sages; to harbor a favor and forget an injury; to draw the line rigidly and resolutely on your own behaviour, and to be lenient with the behavior of of others; to be stern with yourself and forgiving with your fellows; to magnify the joys of life, and belittle the trials; to play the game manfully and comply with the rules; to accept defeat with as good a grace as if it were a victory; to laugh instead of weep; to be one with nature in all her myriad moods, and to enter wholly into the great scheme of the universe of which you are such an infinitesimal part—all of this is fun—real fun. And it is fun that is profitable.—Oral Health.